HOBART

GLASS AND DISHWASHERS

FX/GX SERIES

INSTALLATION AND OPERATION INSTRUCTIONS

Starting from Serial No.:

8652 0001

REV. 17.03.2008

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1 IMPORTANT NOTES

Use in Accordance with Regulations

This machine is exclusively to be used to wash ware such as plates, cups, glasses, cutlery, trays etc.
Do not use for electrically heated cooking and heat conservation appliances.

Safety

Never hose down the machine.

The "**Attention**" symbol is shown beside instructions that are essential for the **safe operation** of the machine.
Please read these passages thoroughly.

Liability

Installations and repairs which are carried out by **non authorized technicians** or the use of **other than original spare parts**, and any **technical alterations** to the machine, **may affect the warranty set out in the standard conditions of sale**.

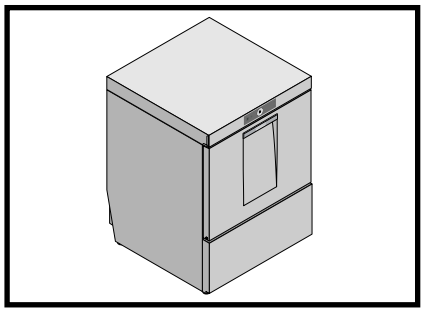
Machine noise level:

The machine noise level is 63 dB (A).

Connecting tensions:

The machine described with this operation manual, has following connecting tensions:
400 V/50 Hz/3 Ph/N/PE or **230 V/50 Hz/1 Ph/N/PE**

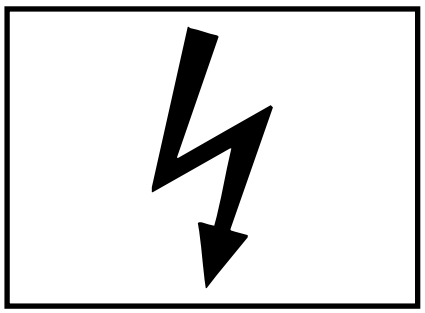
2 INSTALLATION



2.1 LOCATION

- Wall clearence is not required.
- Level machine by turning the feet.
- Distribute machine weight equally onto all feet.

Vapour may escape from the dishwasher door. Therefore adjacent furniture has to be protected to prevent swelling.

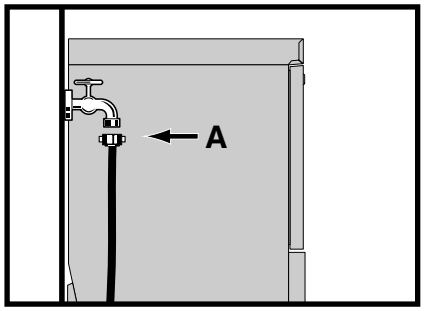


2.2 ELECTRICAL CONNECTION

Must be carried out by an authorized technician according to the local and national codes.

- The electrical supply shall comply with the name-plate data.
  Adaptation to an alternative electrical supply is achievable as per wiring diagram. Respective schemata are adjacent to the connection terminal.
- Line fuses and cable cross section shall comply with the requirements.
- A cut-off device shall be provided to connect the supply cord (isolating switch or accessible plug device).

According to EN 60 335 the appliance must be connected to an equipotential conductor. The connecting screw (⏚) is located beside the cable inlet.



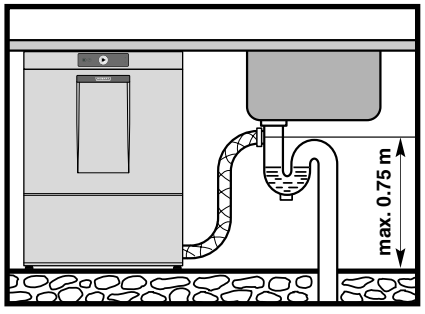
2.3 WATER CONNECTION

Must be carried out by an authorized technician according to the national and local codes.

The machine must be operated with potable water. For water with an extremely high mineral content an external demineralisation is strongly recommended.

- **Machines without softener:** Connect to soft and if possible warm water (up to 4° Clark = 0.5 mmol/l, **max. 60°C**).
- **Machines with softener:** Connect to warm water (**max. 60°C**) if possible.

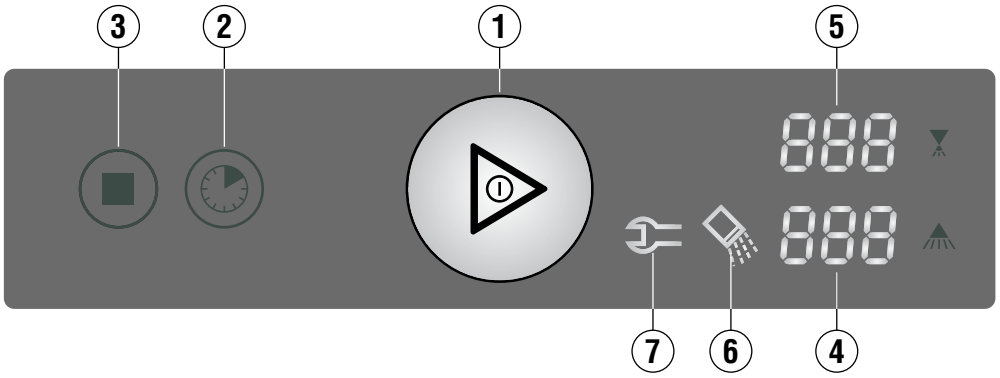
- Line flow pressure 0.5 – 10 bar.
  Important: the line flow pressure must not be less than 0.5 bar.
- **If the line flow pressure is above 10 bar provide pressure reducer at source.**
- Connect the union nut "**A**" (3/4") of the water supply hose to the site shut off valve.
- Do **not kink** or **cut** the supply hose. If an extended supply hose is required, use one of the same specifications as the original.



2.4 DRAIN CONNECTION

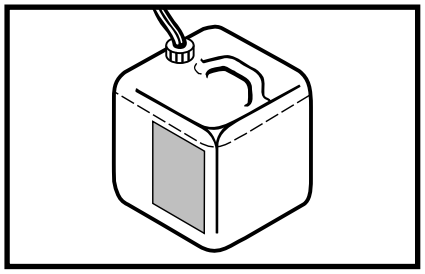
- Connection between machine and site drain must not exceed max. height of 0.75 m.
- Do not kink the drain hose.

3 CONTROLS



① Machine **ON / OFF**	Pushing this button switches the machine on. As soon as the machine is ready for operation, the wash cycle is started by pushing this button also. By pushing and holding (3 seconds) this button, the drain and self cleaning cycle starts. At the end of the cycle, the machine switches off automatically. **After switch off, the machine is not voltage free!** Furthermore the button illuminates to indicate the mode of the machine: **GREEN** (flashing) = Machine fills and starts heating **GREEN** (permanent) = Machine is ready for operation **BLUE** (permanent) = Wash cycle is running **BLUE** (flashing) = Machine draining / switch-off **RED** (permanent) = Failure indication (see chapter 8) **GREEN/RED** (alternate flashing) = Failure indication (see chapter 8)
② **Program** button	By pushing this button, it is possible to select between different preset programs, according to the model and equipment. The program no. (e.g. **P02**) will be shown in the Display ⑤.
③ **Stop** button	In case of operating error or faults, it is possible to switch-off the machine immediately without the drain cycle, by pushing this button. **After switch off, the machine is not voltage free!**
④ **Display**	e.g. temperature indication **Wash** (°C) (see chapter 7).
⑤ **Display**	e.g. temperature indication **Rinse** (°C) (see chapter 7).
⑥ **Salt** required	Indicating the need for regeneration salt to be added. (Only with built-in softener.)
⑦ **Service** indicator	Indicating, that the machine has a fault (see chapter 8).

4 START-UP



4.1 DETERGENT

Do not use any acidic detergent products with the built-in detergent pump! (The ph-value has to be higher than 7.)

– Place the suction hose into the detergent container.
Fill the suction hose according to chapter **4.3**.

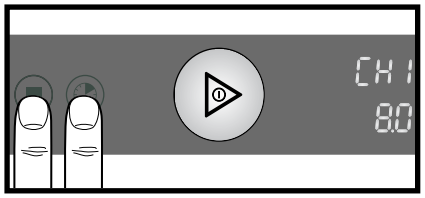
4.2 RINSE AID

– Place the suction hose (**blue marking**) into the rinse aid container.
Fill the suction hose according to chapter **4.3**.

The dosing pumps can operate to a maximum head height of 1.5 m. Do not confuse the containers !

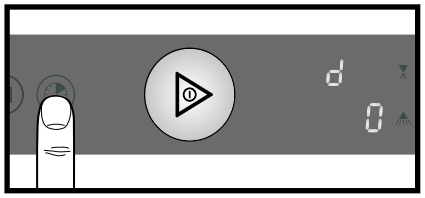
Use only commercial detergent and rinse aid. **Please pay attention to the manufacturers safety instructions.**

4.3 PRIMING THE SUCTION HOSES



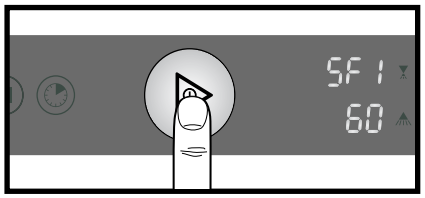
ATTENTION:
The machine has to be switched off.

– **Open the door.**
– Push **Stop** button ③ and **Program** button ② simultaneously until the upper **Display** ⑤ shows "**CH1**" and the lower one ④ "**8.0**".



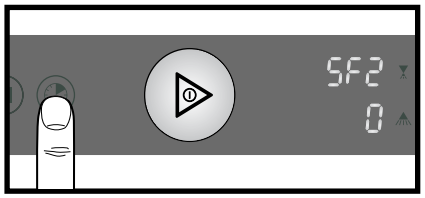
– Push **Program** button repeatedly, until "**d**" and "**0**" is displayed.

– **Close the door.**
In the upper **Display** appears "**SF1**", in the lower one "**0**".



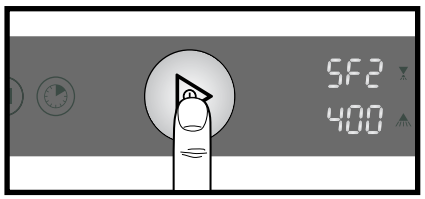
4.3.1 DETERGENT SUCTION HOSE

– Pushing the **ON/OFF** button ① activates the hose priming for 60 seconds.
Each cycle can be interrupted by pushing the **ON/OFF** button again.



4.3.2 RINSE AID SUCTION HOSE

– Push the **Program** button ②.
In the upper **Display** ⑤ appears "**SF2**", in the lower one ④ "**0**".



– Pushing the **ON/OFF** button ① activates the hose priming for 400 seconds.
Each cycle can be interrupted by pushing the **ON/OFF** button again.

4.3.3 TERMINATION OF HOSE PRIMING

– **Open door and close it again or do not press any button for 10 seconds.**

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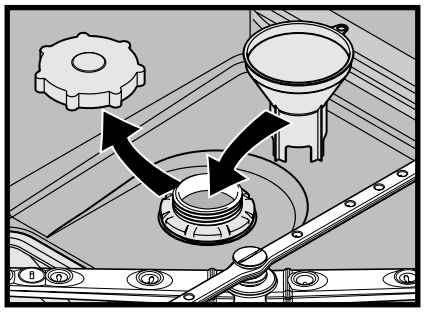
4.4 SOFTENER (only on option)

For the first run, the softener has to be filled with regeneration salt and potable water.

Filling the salt reservoir with cleaning agent will damage the water softener.

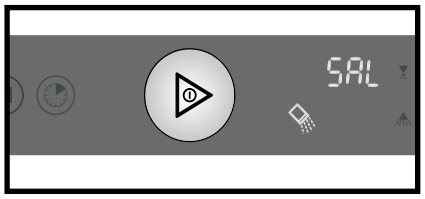


– Open the door.
– Unscrew the softener lid and fill the softener with **2 kg** of "Granular regeneration salt" (do not use salt tablets).
– Fill up the softener with potable water (only at the first run).

Clean seal and rim of softener lid carefully, before closing the lid.

– Close lid and tighten.

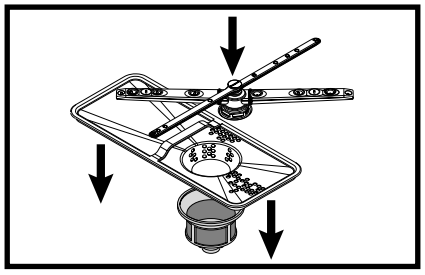
– **Adjust the water hardness according to chapter 9.3 !**



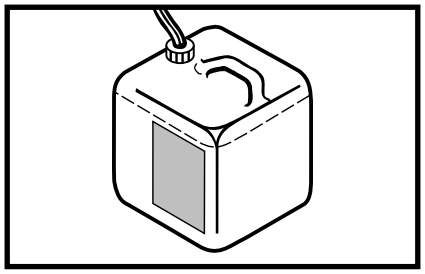
– When the **Salt** indicator ⑥ illuminates during operation, the softener has to be refilled with regeneration salt.
There will be a slight delay before salt light extinguishes after refill.

5 OPERATION

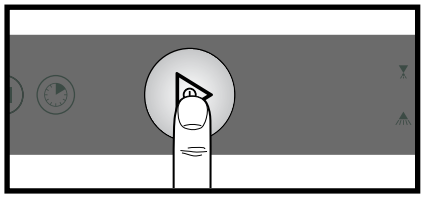
5.1 PREPARATION



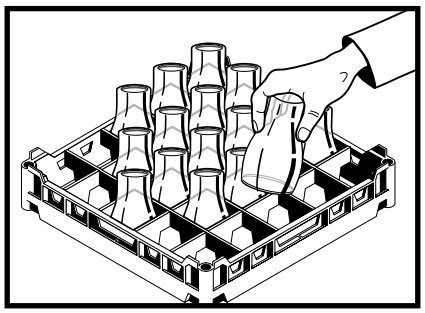
– Check correct position of wash/rinse arms and strainers.
– **Open shut-off valve.**
– **Switch on main switch or put the plug in.**



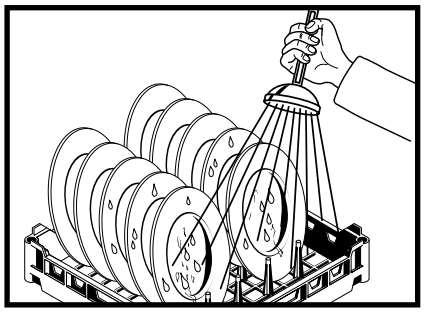
– Check level of detergent and rinse aid containers.



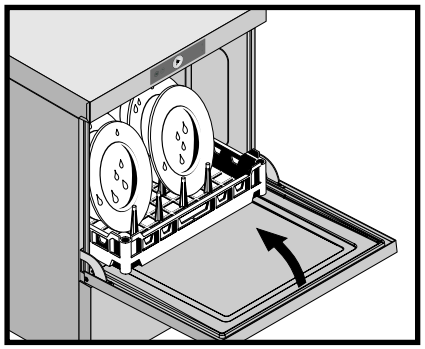
– Close door and push the **ON/OFF** button ①, tank will be filled.
– The **ON/OFF** button flashes **green** during fill and heating cycle. This process can take several minutes.
When the button changes to **green** steady burning light, machine is ready for operation.



– Place glasses and cups face downwards into the rack.

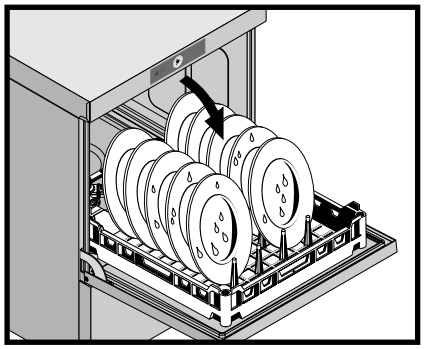


– Remove any food debris before loading plates into rack.
– Spray off greasy food soil.

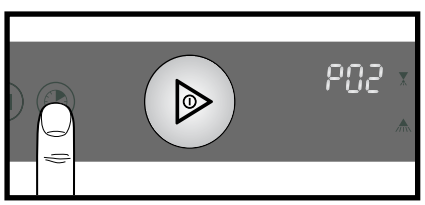


5.2 RUN

– Put rack into the machine and close the door.
– Push the **ON/OFF** button ①. During the wash cycle is running, the button illuminates **blue**.



– As soon as the **ON/OFF** button ① changes to **green** light, the wash cycle is finished.
– Open the door and take out rack.
Allow dishes to dry for 1 minute approx.



– **SELECT PROGRAM:**

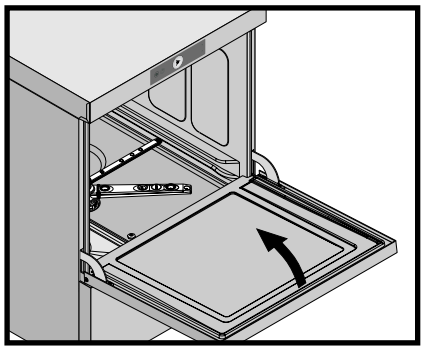
The machine is operating automatically with standard cycle time.
If needed, it is possible to select a shorter or longer program.

To show the present program, push the **Program** button ② before starting the wash cycle.
To change the program, push the **Program** button again.

P01 =	Short cycle	(for light / medium soiled dishes and glassware)
P02 =	Standard cycle	(for medium / heavy soiled dishes)
P03 =	Long cycle	(for dried on soiling and containers)

The machine continues with the chosen cycle time until it is switched off or another program is chosen.

6 SWITCH-OFF AND CLEANING THE MACHINE

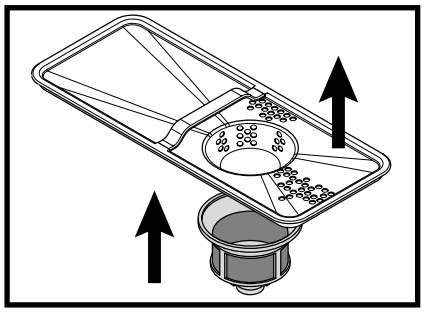


6.1 SWITCH-OFF

– Close the door.
– Push and hold the **ON/OFF** button ① until the button flashes "**blue**".

NOTE:
During the drain cycle, the interior of the machine is cleaned automatically. A final inspection is recommended to remove any food debris.

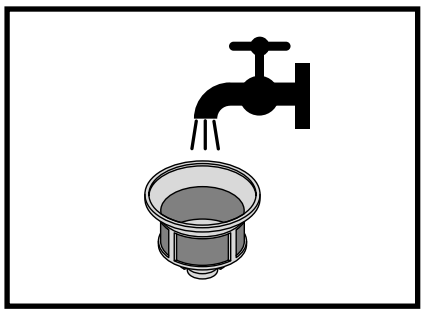
– When the **ON/OFF** button goes off:
Switch off main switch or unplug and close the shut-off valve !



6.2 CLEANING (DAILY)

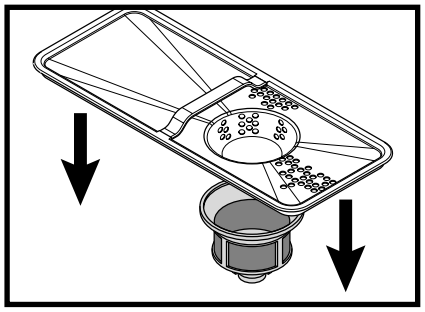
To clean the machine do not use any chloric, acidic or abrasive products and no metallic brushs.

– Open the door, take out and clean strainers.
Please ensure that food debris does not enter pump intake!



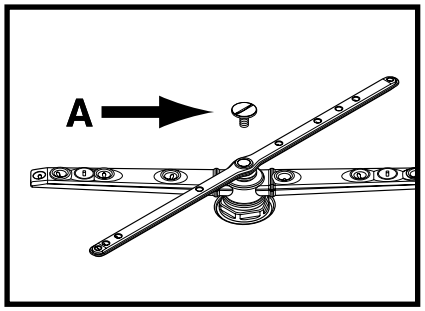
– Flush the fine strainer.

– Clean interior of the machine.



– Put strainers back into place.

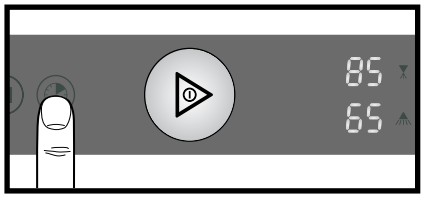
– Leave the door open for ventilation.



6.3 CLEANING (WEEKLY)

– Loosen the retaining screws (**A**) by turning them counter-clockwise.
– Take out wash and rinse arms and flush.

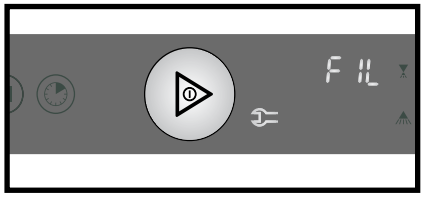
7 PREVIEW OF TEMPERATURES



– Press and hold (**3** seconds) the **Program** button ② until the actual temperatures (**°C**) are displayed (top = rinse, bottom = wash).
The indicators go out **10** seconds after releasing the **Program** button.

Permanent temperature display can be activated on request by the service technician.

8 FAULTS



According to the fault, an error code will be shown in the upper display ⑤ (see table below).

Please report the error code to the service technician.

If the **ON/OFF** button ① is flashing **GREEN/RED** alternately – restricted operation may be possible:

CODE	POSSIBLE CAUSE	MEASURES
AL	Drain hose blocked.	Clean drain hose and restart drain cycle.
HEI	Rinse booster heating defective.	Call the after sales service.
d 0	OPTION External demineralisation cartridge depleted.	Replace cartridge.
SAL	Salt deficiency (only with built-in softener)	Refill the softener with granular regeneration salt.

The **ON/OFF** button ① illuminates **RED** and the **Service** indicator ⑦ is illuminated:

CODE	POSSIBLE CAUSE	MEASURES
FIL	Shut-off valve is closed.	Open shut-off valve at site and switch on machine again.
	Fill valve or fill system defective.	Call the after sales service.
SIE	Tank strainer not correctly positioned.	Put strainer correctly in place.
UL	Drain hose blocked.	Clean drain hose and restart drain cycle.
	Fill system or drain system defective.	Call the after sales service.
F01	Temperature probe "rinse booster" defective.	Call the after sales service.
F02	Temperature probe "tank" defective.	Call the after sales service.
F03	Pressure transmitter "rinse booster" defective.	Call the after sales service.
F04	Pressure transmitter "tank" defective.	Call the after sales service.

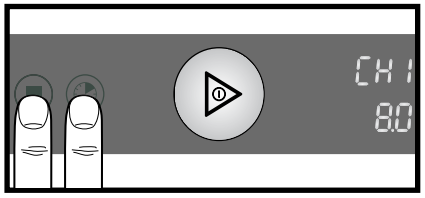
9 SETTINGS AND COUNTER VALUES

ATTENTION:
The machine has to be switched off.

– **Open the door.**

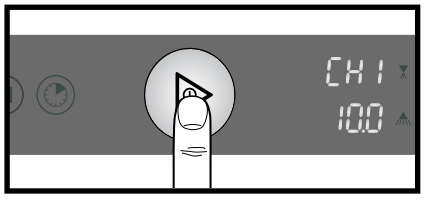
If the door will be closed or if no button is pressed for 10 seconds, the indicator automatically switches off and the new settings will be saved.
Therefore the setting procedure can be interrupted at any time.

9.1 ADJUSTMENT OF DETERGENT DOSAGE QUANTITY



– Push **Stop** button ③ und **Program** button ② simultaneously until in the upper **Display** ⑤ "**CH1**" appears.

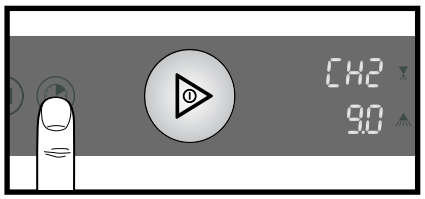
In the lower **Display** ④ appears e.g.:
"**8.0**" = pre-adjusted value of the detergent dosage time =
8.0 s ≈ **2.4** g/l.



– To adjust the detergent dosage time, push **ON/OFF** button ① repeatedly, until the desired value (**0-50** s ≈ **0-15.4** g/l) appears.

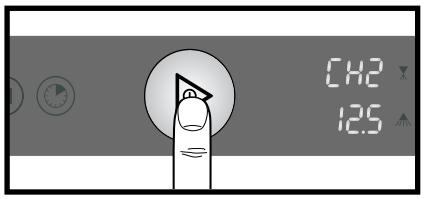
Adjustment should be done in accordance with chemical suppliers recommendations.

9.2 ADJUSTMENT OF RINSE AID DOSAGE QUANTITY



– Push **Program** button ② again.
In the upper **Display** ⑤ appears "**CH2**".

In the lower **Display** ④ appears e.g.:
"**9.0**" = pre-adjusted value of the rinse aid dosage time =
9.0 s ≈ **0.3** g/l.



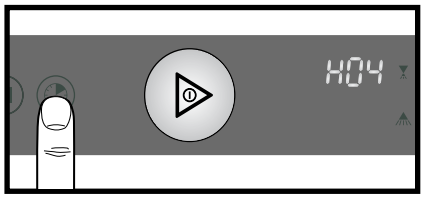
– To adjust the rinse aid dosage time, push **ON/OFF** button ① repeatedly, until the desired value (**0-50** s ≈ **0-1.6** g/l) appears.

Adjustment should be done in accordance with chemical suppliers recommendations.

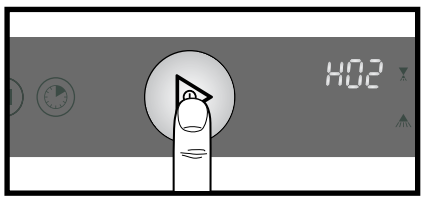
9.3 ADJUSTMENT OF WATER HARDNESS

With optional softener only.

To adjust the softener to the local water hardness (obtain details from local water authority:



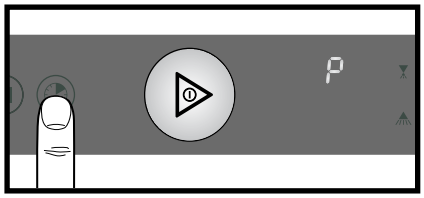
– Push **Program** button ② repeatedly until in the upper **Display** ⑤ "**H04**" appears.



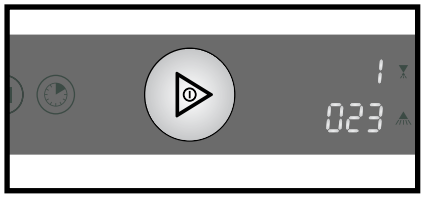
– Push **ON/OFF** button ① repeatedly, until the required value (**H01-H04**) will be displayed.

H01 = up to **9 °eh** / **H02** = **10** to **18 °eh** / **H03 = 19** to **26 °eh** / **H04 = 27** to **38 °eh** water hardness (°eh = Clark).

9.4 CYCLE COUNTER



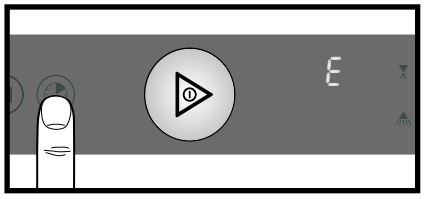
– Push **Program** button ② again.
The display will show alternately "**P**" or the number of wash cycles.



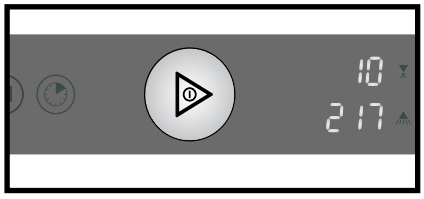
– In the lower **Display** ④ appears the value up to **999**.
Thousands will be shown in the upper Display ⑤.

Example: 1023 wash cycles
Max. indication: **999 999**

9.5 WATER CONSUMPTION COUNTER



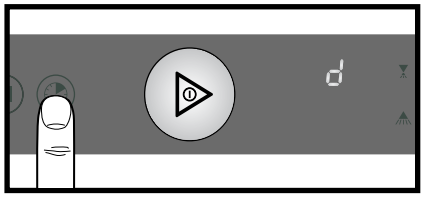
– Push **Program** button ② again.
The display will show alternately "**E**" or the water consumption (liter).



In the lower **Display** ④ appears the value up to **999** liter.
Thousands will be shown in the upper **Display** ⑤.

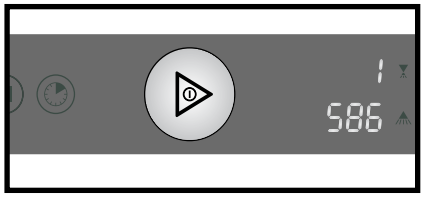
Example: 10217 liter
Max. indication: **999 999**

9.6 REMAINING WATER QUANTITY COUNTER FOR EXTERNAL WATER TREATMENT



Only available if activated in service mode (S18). The capacity (liter) of the water treatment has to be stored via C79/80.

– Push **Program** button ② again.
– The display will show alternately "**d**" and/or the remaining water quantity (liter).



In the lower **Display** ④ appears the value up to **999** liter.
Thousands will be shown in the upper **Display** ⑤.

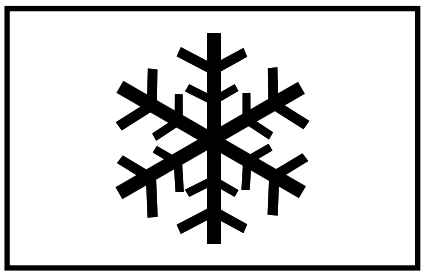
Example: 1586 liter
Max. indication: **999 999**

To reset the counter to pre-set value, push and hold (**3** seconds) the **ON/OFF** button ①.

9.7 TERMINATION OF SETTING MODE OR COUNTER DISPLAY

– **Close the door, open and close it again or do not press any button for 10 seconds.**

10 FROST PREVENTION



In case of frost or longer operation pauses (e.g. for seasonal operations) the machine must be completely drained.

This should be carried out by **after sales service**.

Reset for operation according to chapter 4.

11 MAINTENANCE

For trouble free operation we recommend you enter into a service contract with your local Service Office.

12 TROUBLESHOOTING GUIDE

TYPE OF FAILURE	POSSIBLE CAUSE	REMEDY
Poor wash result		
Dishes are not clean.	Wash arms stiff (you should be able to turn them easily by hand).	Take out wash arms and clean them thoroughly. Check water outlet from machine to wash arms is clear.
	Wash arm nozzles are clogged (visual check).	Take out wash arm, remove cleaning cap and rinse wash arm thoroughly until soil is removed. Replace correctly.
	Rinse arm nozzles are clogged (possibly by lime deposit)	Remove rinse arms and decalcify them in separate container.
	Detergent concentration is too low or too high.	Check setting of detergent concentration. See also operating instructions point 9.1.
	Coarse strainer soiled.	Take out strainer, empty and clean it.
	Fine strainer soiled or obstructed by lime.	Take out fine strainer. If heavily soiled soak in a vinegar solution. Then clean it thoroughly until the pores are free. Cleaning is to be done daily (see operating instructions).
	Wrong program selected for heavily soiled dishes.	Select program with longer wash cycle.
Dishes or glasses do not dry properly.	Rinse aid concentration too low.	Increase concentration. See also operating instructions point 9.2.
	Dishes still greasy.	1. Detergent concentration too low: increase (see instructions). 2. Check if detergent is appropriate. If not choose a stronger one. 3. Drain soiled water and refill machine. Check pre-scrapping procedure.
	Rack is not suitable for type of dishes (sloping).	Use appropriate racks to create a sloping position which allows water to drain away from cavities.
	Dishes stay too long in the machine at the end of program.	Take out dishes as soon as cycle is completed to enable them to dry.

TROUBLESHOOTING GUIDE

TYPE OF FAILURE	POSSIBLE CAUSE	REMEDY
Poor wash result		
Stripes and staines on dishes or glasses.	Rinse aid concentration too high.	Reduce quantity (see instructions).
	Hard water or high mineral content.	Check water quality. Obtain details from local water authority. Recommended values: Ideal degree of hardness is 4° Clark. Ideal conductivity value for glasses is max. 150 µS/cm and for dishes max. 400 µS/cm.
	Rack is not suitable for type of dishes (sloping).	Use appropriate racks to create a sloping position which allows water to drain away from cavities.
	Insufficient rinse aid concentration causes staines	Increase quantity (see instructions)
	Machine with softener: wrong type of salt used.	Use only granular regeneration salt.
Other malfunctions		
Glasses are totally or partially cloudy	Surface of glasses is rough and porous, this is called glass corrosion	This is not caused by a malfunction on the machine. Replace with new glasses.
Glass breakages.	Use of inappropriate dish or glass racks.	Use appropriate racks.
Machine suddenly stops during wash program.	Machine is connected to a "maximum power supply unit" which cuts out the energy consumer at a given point, or machine is interlocked with another energy consumer unit.	Connect machine separately (call electrician).
	Blown site fuse.	Check site fuses.

If no button will be pressed during **6 hours**, the machine switches off automatically without draining.

As continued product improvement is a policy of HOBART, specifications are subject to change without notice.

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